Extron Electronics

INTERFACING, SWITCHING AND DISTRIBUTION

RGB 138xi & 158xi Universal Interfaces with Audio & ADSP™

- 300 MHz (-3dB) Video Bandwidth
- ADSP™ - Advanced Digital Sync Processing
- 15-150 kHz Compatibility
- Unswitched AC Outlet
- Audio Interfacing
- Level/Peaking
- Optional architectural adapter plates
- Simultaneous RGBS/HV output
- RGsB output
- Horizontal & Vertical Centering
- Optional Mounting Kits
- Rack Mountable
- Internal power supply
- 15-Pin HD input (RGB 158xi)
- Buffered 15-pin local monitor output (RGB 158xi)

SERVICE SUPPORT 3 SOLUTIONS

APPLICATIONS

RGB 138x

The **RGB 138x** and **RGB 158x** are universal analog computer-video interfaces with 15-150 kHz scanning ranges and 300 MHz (-3dB) of RGB video bandwidth. Both are compatible with nearly all computers and display signals including VGA, SVGA, XGA, SXGA, MAC, SUN and SGI. These interfaces output simultaneous composite and separate horizontal/vertical sync through its six BNC connectors. Sync processing is accomplished through Extron's ADSP™ Advanced Digital Sync Processing technology. ADSP™ provides all-digital processing of sync signals, eliminating incompatibility issues encountered when using analog sync processing with digital display devices (DLP, LCD, plasma, etc.). Also available for the RGB 138x and RGB 158x are optional Architectural Adapter Plates, which affix to the front panel of the interface. These are available with many of the connector types used in A/V applications, and allow for clean, professional looking installations. The RGB 158x further provides a 15-pin HD input and buffered local monitor output.

Optional, detachable mounting kits give these interfaces remarkable flexibility. The under-desk mounting kit allows each interface to be mounted under any flat surface, such as a desk, podium, table, cabinet, wall, etc. Select the rack mount/through-desk mounting kit so that inputs and centering controls are easily accessed, while the power and output cables are hidden away behind the rack or the surface being penetrated. The RGB 138x and RGB 158x also provide an unswitched AC outlet, internal power supply, and audio interfacing. Unbalanced, computer-generated audio is buffered and converted to line-level balanced audio.

FEATURES

- **High performance compatibility –** Provide a 15-150 kHz horizontal frequency range and 300 MHz of RGB video bandwidth.

FEATURES (Cont.)

- **Built-in Advanced Digital Sync Processing (ADSP™) –** All digital process insures flawless operation with any LCD, DLP, plasma or other digital display device.
- **Optional Architectural Adapter Plates –** Allow for cleaner A/V installations with cables passing through the rear of the enclosure.
- **Two optional mounting kits –** Allows for installation under flat surfaces, as well as through them. Under-desk kit part #70-077-01, Rack-mount/Through-desk kit part #70-077-03.
- **Unswitched AC outlet –** Power a laptop or other peripheral.
- **Image centering –** Allows the input signal to be shifted on the presentation device for a properly centered image.
- **Level/Peaking –** Three level/peaking modes are available to compensate for fuzzy images and streaking associated with cable resistance and system bandwidth losses.
- **Balanced audio conversion –** Unbalanced computer-generated audio is input via a 3.5 mm mini jack and output buffered as balanced line-level audio
- **Simultaneous composite and separate sync output –** Six BNC connectors allow for composite and separate horizontal and vertical sync without switches or other configuration. Sync on green is also available.
- **Buffered MBC support –** A nine volt power socket is available from the front panel of the RGB 138x for use with Extron buffered monitor breakout cables.
- **Termination –** The RGB 138x provides 75 ohm termination for use with laptops and non-terminated monitor breakout cables. The RGB 158x provides termination for pins 4 and 11 of its 15-pin HD input, insuring that computer that require local monitors to operate will do so.
- **LED Indicators –** A two color LED indicates power and video signal detection, while a second red LED indicates minimum/maximum image shift.
- **Internal power supply –** The RGB 138x and RGB 158x each have an internal, auto-switchable 100-240 VAC 50/60 Hz power supply.

SPECIFICATIONS

Video input

Number/type	1 analog RGBHV, RGBS, RGsB, RsGsBs
Connectors	RGB 138ẋ : 1 9-pin D male, MBC/LBC cable or buffer, RGB 158ẋ : 1 15-pin HD male
Nominal level(s)	Analog — 0.3V to 1.5V p-p
Maximum level(s)	Analog — 1.5V p-p
Impedance	RGB 138ẋ : 75 ohms or HI Z, switchable, (set to 75 ohms if no local monitor connected), RGB 158ẋ : 75 ohms
Horizontal Frequency	Autoscan 15 kHz to 150 kHz
Vertical frequency	Autoscan 30 Hz to 120 Hz
Return loss	-30dB @ 5 MHz
Maximum DC offset	4.0V

Video throughput

Gain	Unity (0.7V), 15% with 3dB peaking (0.8V) 30% with 6dB peaking (0.9V)
Bandwidth	300 MHz (-3dB)

Video output

Number/type/format	1 analog RGBHV, RGBS, RGsB
Connectors	6 BNC female (both models), 1 15 pin HD female local monitor output (buffered, RGB 158ẋ)
Nominal level	0.7Vp-p, 0.8Vp-p, 0.9Vp-p
Impedance	75 ohms
Return loss	-30dB @ 5 MHz

Sync

Input type	RGBHV TTL (±), RGBS TTL (±), RGsB 0.3V (-), RsGsBs 1.3V (-)
Output type	RGBHV (±), RGBS(±), RGsB (-)
Input level	2.0V to 5.5V p-p with ±0.2VDC offset (max.)
Output level	4.0V to 5.0V p-p
Input impedance	10 kohms
Output impedance	75 ohms
Max. propagation delay	48 nS
Max. rise/fall time	3.5 nS
Polarity	RGBHV ....when RGBHV is input, polarity follows input; otherwise negative RGBS, RGsB negative

SPECIFICATIONS (Cont.)

Audio input

Number/type	1 PC level stereo, unbalanced
Connectors	1 3.5 mm stereo jack, 2 channel; tip (L), ring (R), sleeve (ground)
Impedance	10 kohms, DC coupled
Minimum level	100mV
Maximum level	+8.5dBu, (unbalanced) @ stated %THD+N

Audio throughput

Gain	Unbalanced 0dB, balanced +6dB
Frequency response	±0.05dB @ 20 Hz to 20 kHz
THD + Noise	0.03% @ 1 kHz, 0.3% @ 20 kHz at rated maximum output drive
S/N	>90dB, output 14dBu, balanced
Stereo channel separation	>95dB @ 1 kHz to 20 kHz

Audio output

Number/type	1 stereo (2 channel), balanced/unbalanced
Connectors	3.5 mm stereo captive screw terminal, 5 conductor, for left and right output
Impedance	50 ohms, unbalanced, 100 ohms balanced
Gain error	±0.1dB channel to channel
Drive (600 ohm)	+14dBu, balanced at stated %THD+N

General

Power	100VAC to 240VAC, 50/60 Hz, 15 Watts, internal, auto-switchable
MBC power jack	RGB 138ẋ : 9.0V DC, 150 mA RGB 158ẋ : none
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing: Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack Mount	Yes, with optional kit #70-077-03
Enclosure type	Metal
Enclosure dimensions	1.75" H x 17.5" W x 9.5" D 4.45cm H x 44.45 cm W x 24.3 cm D
Shipping weight	10 lbs (4.54 kg)
Vibration	NSTA 1A in carton
Approvals	UL, CE, FCC Class A
MTBF	30,000 hours
Warranty	2 years parts and labor

Part Numbers

RGB 138ẋ	60-292-01
RGB 158ẋ	60-293-01

PART NUMBERS

Interface mounting kits:

Under desk mounting kit 70-077-01
Through desk mounting kit 70-077-03

Monitor breakout cables: RGB 138x

MBC VGA/XGA HR 26-162-01
MBC Mac Quadra 26-018-01
MBC SUN Sparc HR 26-424-01
MBC SGI/13W3 HR 26-425-01

Laptop breakout cables:

Laptop breakout cables are available in 3', 6' and 12' lengths with or without audio. Contact Extron for the specific cable for your application.

LBC VGA HR 6' 26-224-01
LBC Mac HR 6' 26-363-01
LBC SUN HR 6' (61 kHz) 26-413-01
LBC SUN HR 6' (71 kHz) 26-413-02
LBC SUN HR 6' (81 kHz) 26-413-03

Signal input cable kits for RGB 158xi :

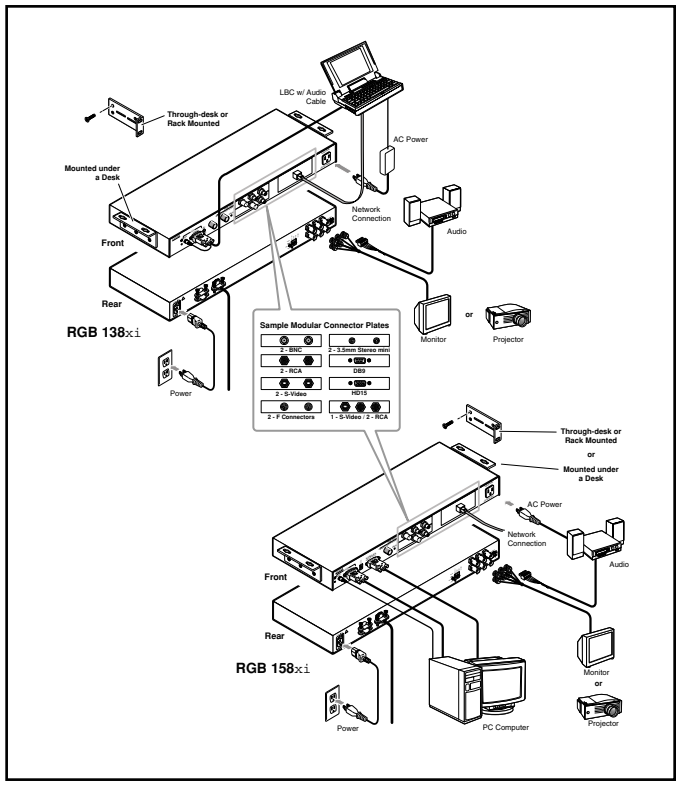
VGA 6' HR 26-112-15
VGA 3' HR A 26-491-01
VGA 6' HR A 26-491-02
VGA 12' HR A 26-491-03
Mac Adapter kit 70-078-01
Mac Adapter kit with Audio 70-078-02
13w3 Adapter cable kit 70-079-01
13w3 Adapter cable kit with Audio 70-079-02

Architectural Adapter plates:

A wide variety of cable pass through Architectural Adapter Plates are available, contact Extron for a complete list of these plates.

Single blank 70-090-01
Double blank 70-090-02
2 BNC pass through 70-091-01
3 BNC pass through 70-091-02
5 BNC pass through 70-091-03
2 RCA pass through 70-093-01
3 RCA pass through 70-093-02
2 S-video female to female 70-095-01
2 RJ 45 pass through 70-100-01
1 3-pin XLR connector 70-103-01
1 S-video and 3 RCA pass 70-107-04
And many more.

APPLICATION DIAGRAM



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